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PREPARATION OF EXTRACELLULAR MATRIX-DERIVED  
DECELLULARIZED CARTILAGE SCAFFOLD

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Cells, scaffolds and growth factors are the three main items in tissue engineering, different types of natural and synthetic scaffold has been used. Another type of scaffolds is extracellular matrix-derived decellularized scaffolds. ECM scaffolds derived from heart valves, blood vessels, skin, tendons and ligament so far. In this study, extracellular matrix of bovine decellularized cartilage was used as a three-dimensional scaffold. To do so, parts of articular cartilage from bovine femur, which were punched in cylindrical shape, were decellularized by snap freezing technique and also addition of sodium dodecyl sulfate (SDS) as a detergent. Histological studies with Hematoxylin & Eosin, Toluidine blue, Safranin-O, Picro-sirius Red and fluorescent dye DAPI showed that after decellularization only extracellular matrix of articular cartilage was remained and cells were completely removed from the tissue.

**Keywords:** tissue engineering, three dimensional matrix, decellularization, articular cartilage